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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER
TAN, ALVIN H

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/824,434	YOON ET AL.
	Examiner	Art Unit	
	ALVIN H. TAN	2173	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>25 August 2008</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-37</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-37</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Remarks

1.   Claims 1-37 have been examined and rejected. This Office action is responsive

to the amendment filed on 8/25/08, which has been entered in the above identified

application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-3, 5, 6, 22, 35, and 36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Iverson (U.S. Patent No. 6,957,075 B1) and Zancho (U.S. Patent No.

5,814,798).

Claims 1-3, 5, 6, 35, 36

3-1.   Regarding claim 1, Iverson teaches the claim comprising a user interface (UI)

support module operable to store input/output modules as stored input/output modules,

by disclosing enabling electronic devices to modify their user interface application set

and functionality based on the location of the electronic device *[column 1, lines 8-13]*. A

memory/storage device stores an interface characteristics/application set database, which correlates a number of interface characteristics and application sets with location types/operating environments and/or appliance personalities *[column 7, lines 47-54]*. An operating system as shown in *[figure 8]* provides an interface between a user interface manager application and hardware elements of the host electronic appliance *[column 11, lines 49-64]*.

Iverson teaches wherein the stored input/output modules are selected corresponding to conditions of respective users, in an input/output module storing unit, by disclosing that based on a determined location of location type of an electronic appliance, a controller identifies an appropriate appliance personality from a plurality of available personalities *[column 7, lines 39-47]*. Users can define the personalities associated with a particular location ID *[column 7, lines 2-5]* and can also change and customize the dynamically selected personality by selecting an alternate personality *[column 7, lines 9-22]*. Appliance personalities represent various user interfaces and functions/applications on an electronic device that are made available to a user *[column 3, lines 23-56]*.

Iverson teaches the UI support module operable to search the input/output module storing unit for a specific input/output module of one of the respective users, by disclosing that based on a determined location of location type of an electronic appliance, a controller identifies an appropriate appliance personality from a plurality of available personalities *[column 7, lines 39-47]*.

Iverson teaches the UI support module operable to execute the specific
input/output module, and operable to support a UI meeting condition of the one of the
respective users, by disclosing that once an appropriate appliance personality is
selected, the interface of the appliance is adjusted to reflect the selected personality
[figure 2, 208].

Iverson teaches wherein the UI support module comprises an input/output
selecting unit, by disclosing that based on a determined location or location type of an
electronic appliance, a controller identifies and selects an appropriate appliance
personality from a plurality of available personalities *[column 7, lines 39-47]*. Although
Iverson teaches adjusting appliance personalities to meet the dynamic demands of ever
mobile appliance users *[column 8, lines 26-32]*, Iverson does not expressly teach a
mapping of each of the respective users with corresponding at least one of the stored
input/output modules. Zancho teaches selecting and managing personal attributes of
devices based on user preferences *[column 1, lines 10-12; column 2, lines 31-37]*. A
donor device stores and provides preferences to application devices *[column 2, lines
37-45]*. When obtaining user preferences from a donor device that has preferences for
more than one user, information of a user such as a user code is sent to access the
donor device *[column 9, lines 49-55; column 10, lines 52-61]*. The user code is used to
select the appropriate preference for the device *[column 10, line 62 to column 11, line
16]*. This allows preferences to be conveniently established for users of various devices.
Since Iverson teaches the need for adjusting a user interface and perceived
functionality based on location or user *[Iverson, column 2, lines 11-14]*, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to

include a mapping of each of the respective users with corresponding at least one of the

appliance personalities, as taught by Zancho. This would allow preferences to be

conveniently established for users of various devices.

3-2.   Regarding claim 2, Iverson and Zancho teach the claim wherein the UI support

module comprises said input/output module storing unit storing and managing the

input/output module, by disclosing a memory/storage device stores an interface

characteristics/application set database, which correlates a number of interface

characteristics and application sets with location types/operating environments and/or

appliance personalities *[Iverson, column 7, lines 47-54]*.

        Iverson teaches an input/output module selecting unit for searching for the

specific input/output module meeting the condition of the one of the respective users in

the input/output module storing unit to provide a searched input/output module, by

disclosing that based on a determined location or location type of an electronic

appliance, a controller identifies and selects an appropriate appliance personality from a

plurality of available personalities *[Iverson, column 7, lines 39-47]*

        Iverson teaches an input/output module executing unit for executing the

searched input/output module searched for by the input/output module selecting unit

and an input/output processing unit for processing the UI processed in the searched

input/output module executed at the input/output module executing unit to output the UI

on a first screen, by disclosing that once an appropriate applicant personality is

selected, the interface of the appliance is adjusted to reflect the selected personality
[Iverson, figure 2, 208].

3-3.   Regarding claim 3, Iverson and Zancho teach the claim wherein the UI support
module further comprises a data processing unit for receiving and processing data
necessary for generation and processing of the UI, said data being generated from an
appliance that requests the specific input/output module, by disclosing one or more
processors in the appliance *[Iverson, figure 7]*.

3-4.   Regarding claim 5, Iverson and Zancho teach the claim wherein the input/output
module storing unit comprises a mapping table comprising storage areas of input/output
module IDs and the stored input/output modules, by disclosing *[Iverson, figures 3, 4]*
which shows tables mapping a location with stored interface characteristics.

3-5.   Regarding claim 6, Iverson and Zancho teach the claim wherein the mapping is a
mapping table and the input/output module selecting unit comprises the mapping table
comprising condition IDs and input/output module IDs, by disclosing *[Iverson, figure 3]*.

3-6.   Regarding claim 35, Iverson and Zancho teach the claim wherein the input/output
selecting unit searches the mapping for the specific input/output module corresponding
to one of the users, to provide a searched input/output module, by disclosing providing a
user code when multiple user preferences are stored and using the user code along

with a determined location or location type of an electronic appliance to select the appropriate preference for the device *[Zancho, column 10, line 62 to column 11, line 16; Iverson, column 7, lines 39-47]*.

3-7.   Regarding claim 36, Iverson and Zancho teach the claim wherein the mapping is prestored in the input/output module selecting unit and the input/output selecting unit searches the prestored mapping for the specific input/output module corresponding to the one of the users, to provide a searched input/output module, by disclosing that the donor device, which provides the user preferences, stores information indicative of a user such as a user code *[Zancho, column 10, lines 52-61]*.

Claim 22

3-8.   Regarding claim 22, Iverson teaches the claim comprising an input/output module registering operation of receiving input/output modules meeting conditions of respective users as received input/output modules and registering the received input/output modules in an internal input/output module selecting unit of an internal UI support module, by disclosing enabling electronic devices to modify their user interface application set and functionality based on the location of the electronic device *[column 1, lines 8-13]*. Users can define the personalities associated with a particular location ID *[column 7, lines 2-5]* and can also change and customize the dynamically selected personality by selecting an alternate personality *[column 7, lines 9-22]*.

Iverson teaches an input/output module providing operation of, if a first specific input/output module of one of the respective users is requested through the internal UI support module, searching for and providing the first specific input/output module as a provided input/output module, by disclosing that based on a determined location of location type of an electronic appliance, a controller identifies an appropriate appliance personality from a plurality of available personalities *[column 7, lines 39-47]*.

Iverson teaches a UI support operation for executing the provided input/output module and supporting a UI meeting the condition of the one of the respective users through the provided input/output module, by disclosing that once an appropriate appliance personality is selected, the interface of the appliance is adjusted to reflect the selected personality *[figure 2, 208]*.

Although Iverson teaches adjusting appliance personalities to meet the dynamic demands of ever mobile appliance users *[column 8, lines 26-32]*, Iverson does not expressly teach a mapping of each of the respective users with corresponding at least one of the stored input/output modules. Zancho teaches selecting and managing personal attributes of devices based on user preferences *[column 1, lines 10-12; column 2, lines 31-37]*. A donor device stores and provides preferences to application devices *[column 2, lines 37-45]*. When obtaining user preferences from a donor device that has preferences for more than one user, information of a user such as a user code is sent to access the donor device *[column 9, lines 49-55; column 10, lines 52-61]*. The user code is used to select the appropriate preference for the device *[column 10, line 62 to column 11, line 16]*. This allows preferences to be conveniently established for users

of various devices. Since Iverson teaches the need for adjusting a user interface and

perceived functionality based on location or user *[Iverson, column 2, lines 11-14]*, it

would have been obvious to one of ordinary skill in the art at the time the invention was

made to include a mapping of each of the respective users with corresponding at least

one of the appliance personalities, as taught by Zancho. This would allow preferences

to be conveniently established for users of various devices.

4.   Claims 4, 8-16, 18-21, and 23-34 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Iverson (U.S. Patent No. 6,957,075 B1), Zancho (U.S. Patent No.

5,814,798), and Dong et al (Pub. No. 2002/0105543 A1).

Claim 4

4-1.   Regarding claim 4, Iverson and Zancho teach the invention with respect to claim

2. Iverson and Zancho do not expressly teach wherein the UI support module further

comprises a data format determining unit for determining whether the searched

input/output module provided by the input/output module selecting unit can process a

type of data of the UI support module, through a table where the input/output modules

and data formats that can be processed in respective input/output modules of the table

are mapped. Dong teaches user interface management for controlled devices

[paragraph 1]. A user interface loader (UIL) provides a controller with a user interface

corresponding to an electronics device to control the operation of the electronics device

through a communication medium *[paragraph 13]*. When selecting an appropriate user

interface, the electronic device provides the UIL with a Global Unique Identifier (GUID) and its unit information (UINFO), which provides identification information about the electronic device *[paragraphs 19, 30]*. The UIL uses the provided identification information when searching a table to determine which types of user interfaces the electronic device can support *[paragraphs 20, 31, 33]*. This ensures that the user interface will work correctly on the electronic device.

Since Iverson and Zancho teach adjusting the user interface and application set of electronic appliances with an appropriate one of a plurality of available appliance personalities, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include determining appropriate appliance personalities based on the types of interfaces the appliance is able to support, as taught by Dong. This would ensure that a selected user interface would work correctly on the electronic device.

Claims 8-12

4-2.   Regarding claim 8, Iverson teaches a UI support module operable to receive and store input/output modules, by disclosing enabling electronic devices to modify their user interface application set and functionality based on the location of the electronic device *[column 1, lines 8-13]*. A memory/storage device stores an interface characteristics/application set database, which correlates a number of interface characteristics and application sets with location types/operating environments and/or appliance personalities *[column 7, lines 47-54]*. An operating system as shown in *[figure*

8] provides an interface between a user interface manager application and hardware elements of the host electronic appliance *[column 11, lines 49-64]*.

Iverson teaches the UI support module operable to receive and store input/output modules corresponding to conditions of respective users, by disclosing that based on a determined location of location type of an electronic appliance, a controller identifies an appropriate appliance personality from a plurality of available personalities *[column 7, lines 39-47]*. Users can define the personalities associated with a particular location ID *[column 7, lines 2-5]* and can also change and customize the dynamically selected personality by selecting an alternate personality *[column 7, lines 9-22]*. Appliance personalities represent various user interfaces and functions/applications on an electronic device that are made available to a user *[column 3, lines 23-56]*.

Iverson teaches the UI support module operable to search for a specific input/output module for a user requested through a household appliance, by disclosing that based on a determined location of location type of an electronic appliance, a controller identifies an appropriate appliance personality from a plurality of available personalities *[column 7, lines 39-47]*.

Iverson teaches the UI support module operable to provide a searched input/output module to the household appliance, and operable to support a UI of the user in the household appliance, by disclosing that once an appropriate appliance personality is selected, the interface of the appliance is adjusted to reflect the selected personality *[figure 2, 208]*.

Iverson does not expressly teach that the UI support module is externally

provided in a web server or a home server and wherein the external UI support module

comprises an external input/output module selecting unit. Dong teaches user interface

management for controlled devices *[paragraph 1]*. A user interface loader (UIL) provides

a controller with a user interface corresponding to an electronics device to control the

operation of the electronics device through a communication medium *[paragraph 13]*.

The UIL may be located outside the controller *[paragraph 18]* and is configured to

search a controller storage medium and a remote network for a user interface

corresponding to identification information. If such a user interface is found, the UIL is

configured to load the user interface on the controller *[paragraph 20]*. As shown in

[figure 2], the remote network includes the Internet with access to the World Wide Web

[paragraph 24]. This allows the user more flexibility in the operation of the consumer

electronic devices by allowing interfaces not locally stored on the electronic device to be

loaded. Since Iverson teaches adjusting the user interface and application set of

electronic appliances with an appropriate one of a plurality of available appliance

personalities, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to include an external user interface module for storing,

searching, and providing the appliance personalities from a web server, as taught by

Dong. This would allow the user more flexibility in the operation of the consumer

electronic devices by allowing interfaces not locally stored on the electronic device to be

retrieved from a web server and loaded.

Iverson and Dong do not expressly teach a mapping of each of the respective

users with corresponding at least one of the stored input/output modules. Zancho

teaches selecting and managing personal attributes of devices based on user

preferences *[column 1, lines 10-12; column 2, lines 31-37]*. A donor device stores and

provides preferences to application devices *[column 2, lines 37-45]*. When obtaining

user preferences from a donor device that has preferences for more than one user,

information of a user such as a user code is sent to access the donor device *[column 9,*

lines 49-55; column 10, lines 52-61]. The user code is used to select the appropriate

preference for the device *[column 10, line 62 to column 11, line 16]*. This allows

preferences to be conveniently established for users of various devices. Since Iverson

and Dong teach the need for adjusting a user interface and perceived functionality

based on location or user *[Iverson, column 2, lines 11-14]*, it would have been obvious

to one of ordinary skill in the art at the time the invention was made to include a

mapping of each of the respective users with corresponding at least one of the

appliance personalities, as taught by Zancho. This would allow preferences to be

conveniently established for users of various devices.

4-3.   Regarding claim 9, Iverson, Dong, and Zancho teach the claim wherein the

external UI support module comprises an external input/output module storing unit for

storing the input/output modules that provide relevant UIs depending on the conditions

of the respective user, by disclosing that an interface characteristics database may

store information which correlates a number of interface characteristics and application

sets with location types/operating environments and/or applicant personalities as shown in *[Iverson, figure 8]*. Since the appliance personalities are retrieved from a web server, they inherently must be stored on an external storing unit.

Iverson, Dong, and Zancho teach an external input/output module selecting unit for searching the external input/output module storing unit for the specific input/output module corresponding to the condition of the one of the respective users requested by the household appliance, and providing a searched input/output module to the household appliance, by disclosing that the UIL may be stored separate from the controller *[Dong, paragraph 18]* and is configured to search a remote network for a user interface corresponding to identification information. If such a user interface is found, the UIL is configured to load the user interface on the controller *[Dong, paragraph 20]*.

4-4.   Regarding claim 10, Iverson, Dong, and Zancho further teach the claim wherein the external UI support module further comprises a data format determining unit for determining whether the searched input/output module provided by the external input/output module selecting unit can process a type of data of the external UI support module, through a table where the input/output modules and data formats that can be processed in respective input/output modules of the table are mapped, by disclosing that when selecting an appropriate user interface, the electronic device provides the UIL with a Global Unique Identifier (GUID) and its unit information (UINFO), which provides identification information about the electronic device *[Dong, paragraphs 19, 30]*. The UIL uses the provided identification information when searching a table to determine which

types of user interfaces the electronic device can support *[Dong, paragraphs 20, 31, 33]*. This ensures that the user interface will work correctly on the electronic device.

Since Iverson, Dong, and Zancho teach adjusting the user interface and application set of electronic appliances with an appropriate one of a plurality of available appliance personalities provided from a web server, it would have been obvious to one of ordinary skill in the art at the time the invention was made to also include determining appropriate appliance personalities based on the types of interfaces the appliance is able to support, as taught by Dong. This would ensure that a selected user interface would work correctly on the electronic device.

4-5.   Regarding claim 11, Iverson, Dong, and Zancho teach the claim wherein the mapping is a mapping table and the external input/output module storing unit comprises the mapping table comprising storage areas of input/output module IDs and the stored input/output modules, by disclosing *[Iverson, figures 3, 4]* which shows tables mapping a location with stored interface characteristics.

4-6.   Regarding claim 12, Iverson, Dong, and Zancho teach the claim wherein the mapping table is a mapping table and the external input/output module selecting unit comprises the mapping table comprising condition IDs and input/output module IDs, by disclosing *[Iverson, figure 3]*.

Claim 13-16, 18-21

4-7.   Regarding claim 13, Iverson teaches the claim comprising an internal user

interface (UI) support module provided in a household appliance, for supporting UIs

through input/output modules depending on conditions of respective user, by disclosing

enabling electronic devices to modify their user interface application set and

functionality based on the location of the electronic device *[column 1, lines 8-13; figure*

1].

Iverson does not expressly teach an external UI support module provided in a

web server or a home server connected to the internal UI support module through a

wired/wireless communication network, for managing the input/output modules

depending on the conditions of the respective user transmitted through the internal UI

support module and providing a specific input/output module requested by the internal

UI support module, wherein the external UI support module comprises an external

input/output module selecting unit. Dong teaches user interface management for

controlled devices *[paragraph 1]*. A user interface loader (UIL) provides a controller with

a user interface corresponding to an electronics device to control the operation of the

electronics device through a communication medium *[paragraph 13]*. The

communication medium may be wireless *[paragraph 25]*. The UIL may be located

outside the controller *[paragraph 18]* and is configured to search a controller storage

medium and a remote network for a user interface corresponding to identification

information. If such a user interface is found, the UIL is configured to load the user

interface on the controller *[paragraph 20]*. As shown in *[figure 2]*, the remote network

includes the Internet with access to the World Wide Web *[paragraph 24]*. This allows the user more flexibility in the operation of the consumer electronic devices by allowing interfaces not locally stored on the electronic device to be loaded. Since Iverson teaches adjusting the user interface and application set of electronic appliances with an appropriate one of a plurality of available appliance personalities, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include storing additional appliance personalities in an external user interface module that can manage and provide the stored appliance personalities from a web server, as taught by Dong. This would allow the user more flexibility in the operation of the consumer electronic devices by allowing interfaces not locally stored on the electronic device to be retrieved from a web server and loaded.

Iverson and Dong do not expressly teach a mapping of each of the respective users with corresponding at least one of the input/output modules. Zancho teaches selecting and managing personal attributes of devices based on user preferences *[column 1, lines 10-12; column 2, lines 31-37]*. A donor device stores and provides preferences to application devices *[column 2, lines 37-45]*. When obtaining user preferences from a donor device that has preferences for more than one user, information of a user such as a user code is sent to access the donor device *[column 9, lines 49-55; column 10, lines 52-61]*. The user code is used to select the appropriate preference for the device *[column 10, line 62 to column 11, line 16]*. This allows preferences to be conveniently established for users of various devices. Since Iverson and Dong teach the need for adjusting a user interface and perceived functionality

based on location or user *[Iverson, column 2, lines 11-14]*, it would have been obvious

to one of ordinary skill in the art at the time the invention was made to include a

mapping of each of the respective users with corresponding at least one of the

appliance personalities, as taught by Zancho. This would allow preferences to be

conveniently established for users of various devices.

4-8.   Regarding claim 14, Iverson, Dong, and Zancho teach the claim wherein the

internal UI support module comprises an input/output module storing unit for storing and

managing the input/output modules, by disclosing a memory/storage device stores an

interface characteristics/application set database, which correlates a number of

interface characteristics and application sets with location types/operating environments

and/or applicant personalities *[Iverson, column 7, lines 47-54]*.

        Iverson, Dong, and Zancho teach the internal UI support module comprising an

input/output module selecting unit for searching the input/output module storing unit for

the specific internal input/output module meeting a condition of the one of the respective

users to provide a searched input/output module, by disclosing that based on a

determined location of location type of an electronic appliance, a controller identifies an

appropriate appliance personality from a plurality of available personalities *[Iverson,

column 7, lines 39-47]*. Users can define the personalities associated with a particular

location ID *[Iverson, column 7, lines 2-5]* and can also change and customize the

dynamically selected personality by selecting an alternate personality *[Iverson, column

7, lines 9-22]*.

Iverson, Dong, and Zancho teach the internal UI support module comprising a data processing unit for receiving and processing data necessary for generation and processing of the UI, said data being generated from the household appliance that requests the input/output module, by disclosing one or more processors in the appliance *[Iverson, figure 7]*.

Iverson, Dong, and Zancho teach the internal UI support module comprising an input/output processing unit for processing the UI processed in the searched input/output module executed at the input/output module executing unit to output the UI on a first screen, by disclosing that once an appropriate applicant personality is selected, the interface of the appliance is adjusted to reflect the selected personality *[Iverson, figure 2, 208; figure 7]*.

4-9.   Regarding claim 15, Iverson, Dong, and Zancho teach the claim wherein the input/output module storing unit comprises a mapping table comprising storage areas of input/output module IDs and the input/output module, by disclosing *[Iverson, figures 3, 4]* which shows tables mapping a location with stored interface characteristics.

4-10.   Regarding claim 16, Iverson, Dong, and Zancho teach the claim wherein the mapping is a mapping table and the input/output module selecting unit includes the mapping table comprising condition IDs and input/output module IDs, by disclosing *[Iverson, figure 3]*.

4-11. Regarding claim 18, Iverson, Dong, and Zancho teach the claim wherein the

external UI support module comprises an external input/output module storing unit for

storing the input/output modules that provide relevant UIs depending on the conditions

of the respective users, by disclosing that an interface characteristics database may

store information which correlates a number of interface characteristics and application

sets with location types/operating environments and/or applicant personalities as shown

in *[Iverson, figure 8]*. Since the appliance personalities may be retrieved from a web

server *[Dong, paragraph 20]*, they inherently must be stored on an external storing unit.

Iverson, Dong, and Zancho teach the external UI support module comprising an

external input/output module selecting unit for searching the external input/output

module storing unit for the specific input/output module corresponding to the condition

of the one of the respecting users requested by the household appliance and providing

a searched input/output module to the household appliance, by disclosing that the UIL is

configured to search a remote network for an appropriate user interface. If such a user

interface is found, the UIL is configured to load the user interface on the controller

[Dong, paragraph 20].

4-12. Regarding claim 19, Iverson, Dong, and Zancho further teach the claim wherein

the external UI support module further comprises a data format determining unit for

determining whether the searched input/output module provided by the external

input/output module selecting unit can process a type of data of the external UI support

module, through a table where the input/output modules and data formats that can be

processed in respective input/output modules of the table are mapped, by disclosing

that when selecting an appropriate user interface, the electronic device provides the UIL

with a Global Unique Identifier (GUID) and its unit information (UINFO), which provides

identification information about the electronic device *[Dong, paragraphs 19, 30]*. The UIL

uses the provided identification information when searching a table to determine which

types of user interfaces the electronic device can support *[Dong, paragraphs 20, 31,*

33]. This ensures that the user interface will work correctly on the electronic device.

Since Iverson, Dong, and Zancho teach adjusting the user interface and

application set of electronic appliances with an appropriate one of a plurality of available

appliance personalities provided from a web server, it would have been obvious to one

of ordinary skill in the art at the time the invention was made to also include determining

appropriate appliance personalities based on the types of interfaces the appliance is

able to support, as taught by Dong. This would ensure that a selected user interface

would work correctly on the electronic device.

4-13. Regarding claim 20, Iverson, Dong, and Zancho teach the claim wherein the

external input/output module storing unit comprises a mapping table comprising storage

areas of input/output module IDs and input/output modules, by disclosing *[Iverson,*

figures 3, 4] which shows tables mapping a location with stored interface characteristics.

4-14. Regarding claim 21, Iverson, Dong, and Zancho teach the claim wherein the

mapping is a mapping table and the external input/output module selecting unit

comprises the mapping table comprising condition IDs and input/output module IDs, by disclosing *[Iverson, figure 3]*.

Claims 23-27

4-15.   Regarding claim 23, Iverson and Zancho teach the invention with respect to claim 22. Iverson further teaches the claim wherein the input/output module registering operation comprises selecting a second specific input/output module for generating a UI to be used in the future by the one of the respective users, as a selected input/output module, by disclosing that users can change and customize the dynamically selected personality by selecting an alternate personality *[Iverson, column 7, lines 9-22]*.

Iverson and Zancho teach determining whether the selected input/output module is present in an internal input/output module storing unit of the internal UI support module, by disclosing that a controller identifies an appropriate appliance personality from a plurality of available personalities *[Iverson, column 7, lines 39-47]*.

Iverson and Zancho teach if the selected input/output module is present, writing a condition ID of the one of the respective users and information on the selected input/output module in the internal input/output module selecting unit, by disclosing that IDs are used to determine the appliance personality *[Iverson, figures 3, 4]*.

Iverson and Zancho teach that appliance personalities may be stored and retrieved internally within an interface database of the appliance *[Iverson, column 10, lines 2-4]*. Although Iverson and Zancho also teaches connections to remote databases *[Iverson, column 10, lines 9-12]* used to identify location type/operating environment of

an appliance in order to select an appropriate one of a plurality of alternative appliance personalities and downloading the information from the remote databases for storage on the local databases *[Iverson, column 7, lines 23-38]*, Iverson and Zancho do not expressly teach that if the selected input/output module is not present, requesting the selected input/output module through an external UI support module, determining whether the selected input/output module is present in an external input/output module storing unit of the external UI support module, and if the selected input/output module is present, writing the condition ID of the one of the respective users and the information on the selected input/output module in the internal input/output module selecting unit. Dong teaches user interface management for controlled devices *[paragraph 1]*. A user interface loader (UIL) provides a controller with a user interface corresponding to an electronics device to control the operation of the electronics device through a communication medium *[paragraph 13]*. The UIL may be located outside the controller *[paragraph 18]* and is configured to first search a controller storage medium for an appropriate user interface *[paragraph 31]*. If an appropriate user interface is not found on an internal storage medium, the UIL searches a remote network across a communication medium *[paragraph 34]*. If such a user interface is found, the UIL is configured to load the user interface on the controller *[paragraph 20]*. As shown in *[figure 2]*, the remote network includes the Internet with access to the World Wide Web *[paragraph 24]*. This allows the user more flexibility in the operation of the consumer electronic devices by allowing interfaces not locally stored on the electronic device to be loaded.

Since Iverson and Zancho teach adjusting the user interface and application set of electronic appliances with an appropriate one of a plurality of available appliance personalities, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store additional appliance personalities in a web server and use an external user interface module, as taught by Dong, to manage and provide the stored appliance personalities from a web server. This would allow the user more flexibility in the operation of the consumer electronic devices by allowing interfaces not locally stored on the electronic device to be retrieved from a web server and loaded.

4-16. Regarding claim 24, Iverson, Zancho, and Dong teach the claim wherein the operation of writing comprises writing the condition ID of the one of the respective users and the information on the selected input/output module in an external input/output module selecting unit, by disclosing that IDs are used to determine the appliance personality *[Iverson, figures 3, 4]*. The condition ID and corresponding appliance personality must be written in the UIL in order for the UIL to search for the correct personality from the remote network.

4-17. Regarding claim 25, Iverson, Zancho, and Dong teach the claim wherein if the selected input/output module is not present in the external input/output module storing unit, providing the UI through a default input/output module, by disclosing that if no user interfaces are found that can be supported by the electronic device, the user can create his/her own user interface using a default user interface *[Dong, paragraphs 34, 36]*.

4-18. Regarding claim 26, Iverson and Zancho teach the invention with respect to

claim 22. Iverson and Zancho further teaches the claim wherein the input/output module

providing operation comprises receiving a condition ID from the one of the respective

users and determining whether the condition ID has been registered through the internal

input/output module selecting unit, by disclosing that users can define the personalities

associated with a particular location ID *[Iverson, column 7, lines 2-5]*. A controller

identifies an appropriate appliance personality from a plurality of available personalities

[Iverson, column 7, lines 39-47].

Iverson and Zancho teach if the condition ID has been registered, selecting the

first specific input/output module according to the condition ID and providing the UI

meeting the condition of the one of the respective users, by disclosing that based on a

determined location of location type of an electronic appliance, a controller identifies an

appropriate appliance personality from a plurality of available personalities *[Iverson,

column 7, lines 39-47]*.

Iverson and Zancho do not expressly teach if the condition ID has not been

registered, requesting an external UI support module to transmit the first specific

input/output module according to the condition ID and providing the UI meeting the

condition of the one of the respective users through the input/output module provided by

the external UI support module. Dong teaches user interface management for controlled

devices *[paragraph 1]*. A user interface loader (UIL) provides a controller with a user

interface corresponding to an electronics device to control the operation of the

electronics device through a communication medium *[paragraph 13]*. The UIL may be located outside the controller *[paragraph 18]* and is configured to first search a controller storage medium for an appropriate user interface *[paragraph 31]*. If an appropriate user interface is not found on an internal storage medium, the UIL searches a remote network across a communication medium *[paragraph 34]*. If such a user interface is found, the UIL is configured to load the user interface on the controller *[paragraph 20]*. As shown in *[figure 2]*, the remote network includes the Internet with access to the World Wide Web *[paragraph 24]*. This allows the user more flexibility in the operation of the consumer electronic devices by allowing interfaces not locally stored on the electronic device to be loaded.

Since Iverson and Zancho teach adjusting the user interface and application set of electronic appliances with an appropriate one of a plurality of available appliance personalities, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store additional appliance personalities in a web server and use an external user interface module, as taught by Dong, to manage and provide the stored appliance personalities from a web server. This would allow the user more flexibility in the operation of the consumer electronic devices by allowing interfaces not locally stored on the electronic device to be retrieved from a web server and loaded.

4-19. Regarding claim 27, Iverson, Zancho, and Dong teach the claim wherein the operation of providing the UI meeting the condition of the one of the respective users through the input/output module provided by the external UI support module comprises

determining whether the first specific input/output module corresponding to the condition ID is present by an external input/output module selecting unit of the external UI support module, by disclosing that the UIL searches a remote network across a communication medium for an appropriate user interface *[Dong, paragraph 34]*.

Iverson, Zancho, and Dong teach if it is determined that the first specific input/output module corresponding to the condition ID is not present, providing the UI through a default input/output module, by disclosing that if no user interfaces are found that can be supported by the electronic device, the user can create his/her own user interface using a default user interface *[paragraphs 33, 36]*.

Iverson, Zancho, and Dong teach if it is determined that the first specific input/output module corresponding to the condition ID is present, determining, by a data format determining unit, whether the first specific input/output module is compatible with an appliance requesting the first specific input/output module, and providing the UI through the default input/output module if it is determined that the first specific input/output module is not compatible with the appliance, or providing the UI through the first specific input/output module if it is determined that the input/output module is compatible with the appliance, by disclosing that when selecting an appropriate user interface, the electronic device provides the UIL with a Global Unique Identifier (GUID) and its unit information (UINFO), which provides identification information about the electronic device *[Dong, paragraphs 19, 30]*. The UIL uses the provided identification information when searching a table to determine which types of user interfaces the electronic device can support *[Dong, paragraphs 20, 31, 33]*. If no user interfaces are

found that can be supported by the electronic device, the user can create his/her own

user interface using a default user interface *[Dong, paragraphs 33, 36]*. This ensures

that the user interface will work correctly on the electronic device.

Since Iverson, Zancho, and Dong teach adjusting the user interface and

application set of electronic appliances with an appropriate one of a plurality of available

appliance personalities, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to also include determining appropriate appliance

personalities based on the types of interfaces the appliance is able to support, as taught

by Dong. This would ensure that a selected user interface would work correctly on the

electronic device.

Claims 28, 29

4-20.   Regarding claim 28, Iverson teaches the claim comprising if an input/output

module corresponding to a specific condition ID is requested by a UI support module

provided in a household electric appliance, searching for the input/output module

corresponding to the condition ID through an input/output module storing unit, by

disclosing enabling electronic devices to modify their user interface application set and

functionality based on the location of the electronic device *[column 1, lines 8-13; figure

1]*. Based on a determined location of location type of an electronic appliance, a

controller identifies an appropriate appliance personality from a plurality of available

personalities *[column 7, lines 39-47]*.

Iverson teaches if the input/output module corresponding to the condition ID is

found as a searched input/output module, providing the searched input/output module to

the UI support module of the household appliance, by disclosing that once an

appropriate appliance personality is selected, the interface of the appliance is adjusted

to reflect the selected personality *[figure 2, 208]*.

Iverson does not expressly teach searching an external input/output module

storing unit and providing the searched input/output module by an external input/output

module selecting unit. Dong teaches user interface management for controlled devices

[paragraph 1]. A user interface loader (UIL) provides a controller with a user interface

corresponding to an electronics device to control the operation of the electronics device

through a communication medium *[paragraph 13]*. The UIL may be located outside the

controller *[paragraph 18]* and is configured to search a controller storage medium and a

remote network for a user interface corresponding to identification information. If such a

user interface is found, the UIL is configured to load the user interface on the controller

[paragraph 20]. As shown in *[figure 2]*, the remote network includes the Internet with

access to the World Wide Web *[paragraph 24]*. This allows the user more flexibility in

the operation of the consumer electronic devices by allowing interfaces not locally

stored on the electronic device to be loaded. Since Iverson teaches adjusting the user

interface and application set of electronic appliances with an appropriate one of a

plurality of available appliance personalities, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to include storing additional

appliance personalities in an external user interface module that can manage and

provide the stored appliance personalities from a web server, as taught by Dong. This would allow the user more flexibility in the operation of the consumer electronic devices by allowing interfaces not locally stored on the electronic device to be retrieved from a web server and loaded.

Iverson and Dong do not expressly teach searching a mapping of each of a plurality of users with corresponding at least one of the stored input/output modules. Zancho teaches selecting and managing personal attributes of devices based on user preferences *[column 1, lines 10-12; column 2, lines 31-37]*. A donor device stores and provides preferences to application devices *[column 2, lines 37-45]*. When obtaining user preferences from a donor device that has preferences for more than one user, information of a user such as a user code is sent to access the donor device *[column 9, lines 49-55; column 10, lines 52-61]*. The user code is used to select the appropriate preference for the device *[column 10, line 62 to column 11, line 16]*. This allows preferences to be conveniently established for users of various devices. Since Iverson and Dong teach the need for adjusting a user interface and perceived functionality based on location or user *[Iverson, column 2, lines 11-14]*, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a mapping of each of the respective users with corresponding at least one of the appliance personalities, as taught by Zancho. This would allow preferences to be conveniently established for users of various devices.

4-21.   Regarding claim 29, Iverson, Dong, and Zancho teach the claim wherein the operation of providing the searched input/output module comprises determining, by a data format determining unit, whether the searched input/output module is compatible with the household appliance, and providing a default input/output module if the searched input/output module is not compatible with the household appliance, or providing the searched input/output module if the searched input/output module is compatible with the household appliance, by disclosing that when selecting an appropriate user interface, the electronic device provides the UIL with a Global Unique Identifier (GUID) and its unit information (UINFO), which provides identification information about the electronic device *[Dong, paragraphs 19, 30]*. The UIL uses the provided identification information when searching a table to determine which types of user interfaces the electronic device can support *[Dong, paragraphs 20, 31, 33]*. If no user interfaces are found that can be supported by the electronic device, the user can create his/her own user interface using a default user interface *[Dong, paragraphs 33, 36]*. This ensures that the user interface will work correctly on the electronic device.

Since Iverson, Dong, and Zancho teach adjusting the user interface and application set of electronic appliances with an appropriate one of a plurality of available appliance personalities, it would have been obvious to one of ordinary skill in the art at the time the invention was made to also include determining appropriate appliance personalities based on the types of interfaces the appliance is able to support, as taught by Dong. This would ensure that a selected user interface would work correctly on the electronic device.

Claim 30-34

4-22. Regarding claim 30, Iverson teaches the claim comprising receiving input/output

modules meeting conditions of respective users as received input/output modules and

registering the received input/output modules in an input/output module selecting unit of

an internal UI support module, by disclosing enabling electronic devices to modify their

user interface application set and functionality based on the location of the electronic

device *[column 1, lines 8-13]*. Users can define the personalities associated with a

particular location ID *[column 7, lines 2-5]* and can also change and customize the

dynamically selected personality by selecting an alternate personality *[column 7, lines 9-*

22].

        Iverson teaches if a specific input/output module of one of the respective users is

requested through the internal UI support module, determining whether the input/output

module is present in an input/output module storing unit, by disclosing that based on a

determined location of location type of an electronic appliance, a controller identifies an

appropriate appliance personality from a plurality of available personalities *[column 7,*

lines 39-47].

        Iverson teaches if the specific input/output module is present in the input/output

module storing unit, providing a UI meeting the condition of the one of the respective

users through the specific input/output module, by disclosing that once an appropriate

appliance personality is selected, the interface of the appliance is adjusted to reflect the

selected personality *[figure 2, 208]*.

Iverson does not expressly teach if the specific input/output module is not
present in the input/output module storing unit, requesting an external input/output
module storing unit provided in an external server at a remote place to transmit the
specific input/output module as a transmitted input/output module and providing the UI
meeting the condition of the one of the respective users through the transmitted
input/output module. Dong teaches user interface management for controlled devices
[paragraph 1]. A user interface loader (UIL) provides a controller with a user interface
corresponding to an electronics device to control the operation of the electronics device
through a communication medium *[paragraph 13]*. The UIL may be located outside the
controller *[paragraph 18]* and is configured to first search a controller storage medium
for an appropriate user interface *[paragraph 31]*. If an appropriate user interface is not
found on an internal storage medium, the UIL searches a remote network across a
communication medium *[paragraph 34]*. If such a user interface is found, the UIL is
configured to load the user interface on the controller *[paragraph 20]*. As shown in
[figure 2], the remote network includes the Internet with access to the World Wide Web
[paragraph 24]. This allows the user more flexibility in the operation of the consumer
electronic devices by allowing interfaces not locally stored on the electronic device to be
loaded. Since Iverson teaches adjusting the user interface and application set of
electronic appliances with an appropriate one of a plurality of available appliance
personalities, it would have been obvious to one of ordinary skill in the art at the time
the invention was made to store additional appliance personalities in a web server and
use an external user interface module, as taught by Dong, to manage and provide the

stored appliance personalities from a web server. This would allow the user more flexibility in the operation of the consumer electronic devices by allowing interfaces not locally stored on the electronic device to be retrieved from a web server and loaded.

Iverson and Dong do not expressly teach searching a mapping of each of the respective users with corresponding at least one of received input/output modules. Zancho teaches selecting and managing personal attributes of devices based on user preferences *[column 1, lines 10-12; column 2, lines 31-37]*. A donor device stores and provides preferences to application devices *[column 2, lines 37-45]*. When obtaining user preferences from a donor device that has preferences for more than one user, information of a user such as a user code is sent to access the donor device *[column 9, lines 49-55; column 10, lines 52-61]*. The user code is used to select the appropriate preference for the device *[column 10, line 62 to column 11, line 16]*. This allows preferences to be conveniently established for users of various devices. Since Iverson and Dong teach the need for adjusting a user interface and perceived functionality based on location or user *[Iverson, column 2, lines 11-14]*, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include searching a mapping of each of the respective users with corresponding at least one of the appliance personalities, as taught by Zancho. This would allow preferences to be conveniently established for users of various devices.

4-23. Regarding claim 31, Iverson, Dong, and Zancho teach the claim wherein the input/output module registering operation comprises selecting the specific input/output

module for generating the UI to be used in the future by the one of the respective users,
as a selected input/output module, by disclosing that users can change and customize
the dynamically selected personality by selecting an alternate personality *[Iverson,
column 7, lines 9-22]*.

Iverson, Dong, and Zancho teach determining whether the selected input/output
module is present in the input/output module storing unit of the internal UI support
module, by disclosing that a controller identifies an appropriate appliance personality
from a plurality of available personalities *[Iverson, column 7, lines 39-47]*.

Iverson, Dong, and Zancho teach if the selected input/output module is present,
writing a condition ID of the one of the respective users and information on the selected
input/output module in the internal input/output module selecting unit, by disclosing that
IDs are used to determine the appliance personality *[Iverson, figures 3, 4]*.

Iverson, Dong, and Zancho teach if the specific input/output module is not
present in the input/output module storing unit, requesting an external input/output
module storing unit provided in an external server at a remote place to transmit the
specific input/output module as a transmitted input/output module and providing the UI
meeting the condition of the one of the respective users through the transmitted
input/output module, by disclosing that if an appropriate user interface is not found on
an internal storage medium, the UIL searches a remote network across a
communication medium *[Dong, paragraph 34]*. If such a user interface is found, the UIL
is configured to load the user interface on the controller *[Dong, paragraph 20]*.

4-24.   Regarding claim 32, Iverson, Dong, and Zancho teach the claim wherein the operation of writing comprises writing the condition ID of the one of the respective users and the information on the selected input/output module in an external input/output module selecting unit, by disclosing that IDs are used to determine the appliance personality *[Iverson, figures 3, 4]*. The condition ID and corresponding appliance personality must be written in the UIL in order for the UIL to search for the correct personality from the remote network.

4-25.   Regarding claim 33, Iverson, Dong, and Zancho teach the claim wherein the operation of providing the UI comprises determining, by a data format determining unit, whether specific input/output module is compatible with the internal UI support module, and providing the UI through a default input/output module if the specific input/output module is not compatible with the internal UI support module, or providing the UI through the specific input/output module if the specific input/output module is compatible with the internal UI support module, by disclosing that when selecting an appropriate user interface, the electronic device provides the UIL with a Global Unique Identifier (GUID) and its unit information (UINFO), which provides identification information about the electronic device *[Dong, paragraphs 19, 30]*. The UIL uses the provided identification information when searching a table to determine which types of user interfaces the electronic device can support *[Dong, paragraphs 20, 31, 33]*. If no user interfaces are found that can be supported by the electronic device, the user can create

his/her own user interface using a default user interface *[paragraphs 33, 36]*. This
ensures that the user interface will work correctly on the electronic device.

Since Iverson, Dong, and Zancho teach adjusting the user interface and
application set of electronic appliances with an appropriate one of a plurality of available
appliance personalities, it would have been obvious to one of ordinary skill in the art at
the time the invention was made to also include determining appropriate appliance
personalities based on the types of interfaces the appliance is able to support, as taught
by Dong. This would ensure that a selected user interface would work correctly on the
electronic device.

4-26.   Regarding claim 34, Iverson, Dong, and Zancho teach the claim wherein if the
selected input/output module is not present in the input/output module storing unit of the
external UI support module, providing the UI through a default input/output module, by
disclosing that if no user interfaces are found that can be supported by the electronic
device, the user can create his/her own user interface using a default user interface
[Dong, paragraphs 34, 36].

5.   Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson
(U.S. Patent No. 6,957,075 B1), Zancho (U.S. Patent No. 5,814,798), and Nakajima
(U.S. Patent No. 7,095,456 B2).

Claim 7

5-1.   Regarding claim 7, Iverson and Zancho teach the invention with respect to claim

2. Iverson and Zancho do not expressly teach the claim wherein the input/output

processing unit transmits the UI to a remote device with a second screen. Nakajima

teaches a method of remotely controlling electronic devices *[column 1, lines 7-13]*. A

field extensible remote control receives user interfaces from electronic devices *[column

5, lines 22-28]* and may display the user interface on a screen of the remote control in

order to control the electronic devices *[column 7, lines 12-38]*. Receiving a user

interface directly from the electronic device allows a universal remote control to control

the electronic devices, even if the electronic devices have updated or different user

interfaces.

Since Iverson and Zancho teach adjusting the user interface and application set

of electronic appliances with an appropriate one of a plurality of available appliance

personalities, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to transmit the UI to a remote device with a second screen, as

taught by Nakajima. This would allow a remote control to control the electronic device,

even if the electronic devices receive updated or different user interfaces.

6.   Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson

(U.S. Patent No. 6,957,075 B1), Zancho (U.S. Patent No. 5,814,798), and Miller et al

(Pub. No. US 2003/0046557 A1).

Claim 37

6-1.   Regarding claim 37, Iverson and Zancho teach the invention with respect to
claim 1. Iverson and Zancho further teach wherein the mapping is prestored, by
disclosing that the donor device, which provides the user preferences, stores
information indicative of a user such as a user code *[Zancho, column 10, lines 52-61]*.

   Iverson and Zancho do not expressly teach wherein the one of the users is an
authenticated user in an authentication. Miller teaches a system that provides
customized display settings and preferences for multiple users *[paragraph 16]*. Users
are authenticated before they can access their preferences *[paragraph 15]*. This would
provide a level of security for accessing specific user-related information. Since Iverson
and Zancho teach providing user-related information, it would have been obvious to one
of ordinary skill in the art at the time the invention was made to authenticate a user in an
authentication, as taught by Miller. This would provide a level of security for accessing
specific user-related information.

7.   Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson
(U.S. Patent No. 6,957,075 B1), Dong et al (Pub. No. 2002/0105543 A1), Zancho (U.S.
Patent No. 5,814,978), and Nakajima (U.S. Patent No. 7,095,456 B2).

Claim 17

7-1.   Regarding claim 17, Iverson, Dong, and Zancho teach the invention with respect
to claim 14. Iverson, Dong, and Zancho do not expressly teach the claim wherein the

input/output processing unit transmits the UI to a remote device with a second screen.

Nakajima teaches a method of remotely controlling electronic devices *[column 1, lines 7-13]*. A field extensible remote control receives user interfaces from electronic devices *[column 5, lines 22-28]* and may display the user interface on a screen of the remote control in order to control the electronic devices *[column 7, lines 12-38]*. Receiving a user interface directly from the electronic device allows a universal remote control to control the electronic devices, even if the electronic devices have updated or different user interfaces.

Since Iverson, Dong, and Zancho teach adjusting the user interface and application set of electronic appliances with an appropriate one of a plurality of available appliance personalities, it would have been obvious to one of ordinary skill in the art at the time the invention was made to transmit the UI to a remote device with a second screen, as taught by Nakajima. This would allow a remote control to control the electronic device, even if the electronic devices receive updated or different user interfaces.

Response to Arguments

8.   The Examiner acknowledges the Applicant's amendments to claims 9, 11, 18, 19, 22, 24, 31, 32, and 34. Regarding independent claim 1, the Applicant alleges that Iverson (U.S. Patent No. 6,957,075 B1) and Zancho (U.S. Patent No. 5,814,798), as described in the previous Office action, do not explicitly teach or suggest a UI support module operable to search the input/output module storing unit for a specific

input/output module of one of the respective users, wherein the UI support module

comprises an input/output module selecting unit including a mapping of each of the

respective users with corresponding at least one of the stored input/output modules.

Contrary to Applicant's arguments, Iverson discloses that a user can define the

personalities associated with a particular location ID *[column 7, lines 2-5]* and can also

change and customize the dynamically selected personality by selecting an alternate

personality *[column 7, lines 9-22]*. <u>Since the appliance may be a portable computer</u>

<u>*[column 3, lines 41-44]* it may have multiple users depending on its location (i.e.</u>

<u>someone using the appliance at work and a home user) *[column 1, lines 53-60]*. There</u>

<u>is no restriction on which user sets up the personalities and thus, multiple users would</u>

<u>be able to customize the personalities based on a location.</u> Iverson, however, does not

expressly teach a mapping of each of the respective users with corresponding at least

one of the stored input/output modules. Zancho discloses selecting and managing

personal attributes of devices based on user preferences *[column 1, lines 10-12;*

column 2, lines 31-37]. A donor device stores and provides preferences to application

devices *[column 2, lines 37-45]*. When obtaining user preferences from a donor device

that has preferences for more than one user, information of a user such as a user code

is sent to access the donor device *[column 9, lines 49-55; column 10, lines 52-61]*. The

user code is used to select the appropriate preference for the device *[column 10, line 62*

to column 11, line 16]. <u>Therefore, once a user sets a preference for a particular device,</u>

<u>the user would be able to load their exact same preferences for that particular device by</u>

<u>using the donor device. If a device had previously been configured by a user, there</u>

would be no need to predict preferences since those preferences for attributes which
are common to multiple application devices are automatically reusable *[column 2, line
67 to column 3, line 2]*. This allows preferences to be conveniently established for users
of various devices. Since Iverson discloses the need for adjusting a user interface and
perceived functionality based on location or user *[Iverson, column 2, lines 11-14]* and
that the system is fully capable of allowing multiple users to customize the personalities,
it would have been obvious to one of ordinary skill in the art at the time the invention
was made to include a mapping of each of the respective users with corresponding at
least one of the appliance personalities, as taught by Zancho. This would allow
preferences to be conveniently established for users of various devices.

Applicant alleges that Iverson does not expressly teach the claimed conditions of
respective users. Examiner notes that conditions of respective users may be interpreted
as a preference of the user, a setting of the user, or information pertaining to the user.
Contrary to Applicant's arguments, Iverson teaches that users can define the
personalities associated with a particular location ID [column 7, lines 2-5] and can also
change and customize the dynamically selected personality by selecting an alternate
personality [column 7, lines 9-22]. Appliance personalities represent various user
interfaces and functions/applications on an electronic device that are made available to
a user [column 3, lines 23-56]. Thus, the stored input/output modules are selected
corresponding to conditions set by a user

Applicant alleges that Examiner is impermissibly relying on hindsight in an effort
to render the claimed invention unpatentable. Contrary to Applicant's arguments,

Iverson discloses that the appliance may be a portable computer *[column 3, lines 41-44]* and may have multiple or different users depending on its location (i.e. someone using the appliance at work and a home user) *[column 1, lines 53-60]*. There is no restriction on which user sets up the personalities and thus, multiple users would be fully capable of customizing the personalities based on a location. The teaching of Zancho would enhance Iverson because it would allow multiple users of an appliance to store individual preferences *[Zancho, column 9, lines 49-55]* based on the location as taught by Iverson, rather than having only a single location preference for all the users of the appliance.

Similar arguments have been presented for independent claims 8, 13, 22, 28, and 30 and thus, Applicant's arguments are not persuasive for the same reasons.

Regarding claim 35, Applicant alleges that Iverson and Zancho do not explicitly teach that the input/output selecting unit searches the mapping for the specific input/output module corresponding to one of the users, to provide a searched input/output module. Contrary to Applicant's arguments, as described above, Zancho discloses that if a device had previously been configured by a user, there would be no need to predict preferences since those preferences for attributes which are common to multiple application devices are automatically reusable *[Zancho, column 2, line 67 to column 3, line 2]*. Thus, there is a mapping that is searched *[Zancho, column 9, lines 49-55; column 10, line 62 to column 11, line 16]*. Prediction of a user preference is only done when the device has preferences that have not yet been configured by the user *[Zancho, column 3, lines 2-5]*.

Regarding claim 36, Applicant alleges that Iverson and Zancho do not explicitly teach that the mapping is prestored in the input/output module selecting unit and the input/output selecting unit searches the prestored mapping for the specific input/output module corresponding to the one of the users, to provide a searched input/output module. Contrary to Applicant's arguments, as described above, Zancho discloses that if a device had previously been configured by a user, there would be no need to predict preferences since those preferences for attributes which are common to multiple application devices are automatically reusable *[Zancho, column 2, line 67 to column 3, line 2]*. Thus, there is a mapping that is searched *[Zancho, column 9, lines 49-55; column 10, line 62 to column 11, line 16]*.

Applicant states that dependent claims 2-7, 9-12, 14-21, 23-27, 29, and 31-37 recite all the limitations of the independent claims, and thus, are allowable in view of the remarks set forth regarding independent claims 1, 8, 13, 22, 28, and 30. However, as discussed above, Iverson and Zancho are considered to teach claims 1, 8, 13, 22, 28, and 30, and consequently, claims 2-7, 9-12, 14-21, 23-27, 29, and 31-37 are rejected.

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to <u>ALVIN H. TAN</u> whose telephone number is <u>(571)272-

8595</u>. The examiner can normally be reached on Mon-Fri 8:00-4:30.

         If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dennis Chow can be reached on 571-272-7767. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

         Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHT   /Tadesse Hailu/

Assistant Examiner   Primary Examiner, Art Unit 2173
Art Unit 2173